P1351
Paper Poster Session
New and old antibiotics against Gram-positive cocci in vitro

In vitro activity of tedizolid and key comparators against Staphylococcus aureus isolated from Latin America: 2014-2015

Doug Biedenbach[1], Meredith Hackel[1], Thomas Lynch[1], Jeff Alder[2], Daniel Sahm*[1]

[1]*International Health Management Associates, Inc., Schaumburg, Illinois, United States*

[2]*Bayer Healthcare Pharmaceuticals , Montville, New Jersey, United States*

Background: *Staphylococcus aureus* (SA) is the predominant cause of acute bacterial skin and skin structure infections (ABSSSI) and frequently of nosocomial pneumonia. The prevalence of methicillin-resistant SA (MRSA) ranges between 20 and 70% worldwide. Development of any new agent for the treatment of infections caused by MRSA must be accompanied by on-going monitoring of that drug's *in vitro* activity. Tedizolid (TZD) is a novel oxazolidinone with potent activity against Gram-positive pathogens, including MRSA. This study investigated the *in vitro* activity of TZD versus linezolid (LZD), vancomycin (VAN), and teicoplanin (TEC) against SA from five Latin American countries.

Material/methods: SA isolates (428 MRSA and 464 MSSA) were collected throughout 2014-2015 from sites in five countries. All isolates were tested centrally by broth microdilution according to CLSI guidelines.

Results: The Table shows MIC_{90} MIC values (mg/L) (%S)[a] for TZD and three gram-positive comparators.

Country	Organism (n)	Tedizolid	Linezolid	Vancomycin	Teicoplanin
Argentina	MSSA (62)	0.5 (100)	2 (100)	1 (100)	1 (100)
	MRSA (86)	0.5 (100)	2 (100)	1 (100)	1 (100)
Brazil	MSSA (238)	0.5 (100)	4 (100)	1 (100)	1 (100)
	MRSA (163)	0.5 (100)	4 (100)	2 (100)	1 (100)
Chile	MSSA (65)	0.5 (100)	2 (100)	1 (100)	1 (100)
	MRSA (87)	0.5 (100)	2 (100)	1 (100)	2 (100)
Colombia	MSSA (29)	0.5 (100)	2 (100)	1 (100)	1 (100)
	MRSA (46)	0.5 (100)	2 (100)	1 (100)	1 (100)
Mexico	MSSA (70)	0.5 (100)	2 (100)	1 (100)	1 (100)
	MRSA (46)	0.5 (100)	2 (100)	1 (100)	2 (100)

a. FDA breakpoints were applied for TZD and EUCAST breakpoint were applied for LZD, VAN, and TEC.

In all LA countries, TZD has shown the highest potency against both MRSA and MSSA Based on MIC_{90} values in the overall collection of SA isolates, TZD was 8-fold more potent than LZD and 2-fold more potent than VAN and TEC.

Conclusions: TZD exhibited the most potent *in vitro* activity among the agents analyzed against both MRSA and MSSA in all Latin American countries. The findings support the global clinical development of TZD for severe infections caused by MRSA such as ABSSSIs and nosocomial pneumonia.